

Title (en)  
Compositions and methods for well completions

Title (de)  
Zusammensetzungen und Verfahren zur Komplettierung von Bohrlöchern

Title (fr)  
Compositions et procédés pour compléter des puits

Publication  
**EP 2743444 A1 20140618 (EN)**

Application  
**EP 12306603 A 20121217**

Priority  
EP 12306603 A 20121217

Abstract (en)  
Thermal recovery wells, geothermal wells and deep hot wells may involve the application of heat to the cement sheath and well casing at some time after the cement has set. Such heating may subject the cement sheath to mechanical burdens that may lead to failure. Such burdens may be lessened if the linear thermal coefficient of expansion is variable and approximates that of the well casing. A variable linear thermal coefficient of expansion may be achieved by incorporating blast furnace slag, silica fume, fly ash or a combination thereof in the cement blend.

IPC 8 full level  
**E21B 33/14** (2006.01); **C09K 8/467** (2006.01); **E21B 43/24** (2006.01)

CPC (source: EP US)  
**C04B 7/02** (2013.01 - US); **C04B 28/04** (2013.01 - EP US); **C09K 8/467** (2013.01 - EP US); **E21B 33/14** (2013.01 - EP US); **E21B 43/24** (2013.01 - EP US); **G06F 30/13** (2020.01 - US); **Y02W 30/91** (2015.05 - EP US)

C-Set (source: EP US)  
**C04B 28/04** + **C04B 18/08** + **C04B 18/141** + **C04B 18/146**

Citation (applicant)  
• THIERCELIN MJ ET AL.: "Cement Design Based on Cement Mechanical Response", PAPER SPE, 1998, pages 52890  
• NELSON EB; MICHAUX M; DROCHON B: "Well Cementing", 2006, article "Cement Additives and Mechanisms of Action", pages: 49 - 91  
• DARGAUD B; BOUKELIFA L: "Well Cementing", 2006, article "Laboratory Testing, Evaluation, and Analysis of Well Cements", pages: 627 - 658

Citation (search report)  
• [XY] US 2012018154 A1 20120126 - JAMES SIMON G [FR]  
• [Y] WO 2012022364 A1 20120223 - SCHLUMBERGER SERVICES PETROL [FR], et al  
• [X] US 2012145392 A1 20120614 - JAMES SIMON G [FR]

Cited by  
CN111980675A; CN108729901A

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 2743444 A1 20140618**; CA 2892192 A1 20140626; US 2015330179 A1 20151119; WO 2014099693 A1 20140626

DOCDB simple family (application)  
**EP 12306603 A 20121217**; CA 2892192 A 20131216; US 2013075230 W 20131216; US 201314652125 A 20131216